



Veterinary REPORT

College of Veterinary Medicine
University of Illinois at Urbana-Champaign
Winter 1989, Volume 13, No. 4

New Recombinant Vaccine Will Protect Poultry Health

CHICKENS AND OTHER POULTRY, already a favored meat among American consumers, may soon benefit from improved disease control, making the product even more economical. A University of Illinois College of Veterinary Medicine researcher has completed the first step towards development of a recombinant vaccine which could protect poultry from multiple diseases with just one application.

By splicing a gene from a costly poultry fowlpox vaccine virus, Dr. Deoki Tripathy, professor of veterinary pathobiology at the college, found that chickens vaccinated with the resulting recombinant vaccine developed antibodies against both fowlpox virus and the foreign respiratory disease antigen.

"This is the first recombinant vaccine ever developed on the University of Illinois at Urbana campus, although similar work is being done elsewhere," he notes.

Eventually, as a result of Dr. Tripathy's recombinant vaccine work, commercial poultry could be protected against many diseases by inserting a specific gene(s) from these other disease-producing organisms into fowlpox vaccine virus, thereby creating a multivalent recombinant vaccine. Such a vaccine hopefully will be less expensive, more standardized, and labor saving. Already several investigators are working on isolation of such a specific gene(s) from different poultry pathogens.

According to Dr. Tripathy, the poultry industry has been vaccinating commercial poultry against fowlpox, a disease which causes skin and mouth lesions on affected poultry as well as a decrease in productivity, for over 40 years. But recombinant vaccines, which could protect against more than one disease, were not available.

Recombinant virus vaccines are developed from existing virus vaccines by inserting a specific gene(s) from another disease-causing agent(s), thereby making the new vaccine capable of protecting against the new as well as the old disease.

The process is complicated. A foreign gene of interest from the disease-causing agent must be inserted into the existing vaccine virus in such a way that it does not affect the replicative capabilities of the existing, parent virus. To achieve this, initially a non-essential section of the parent virus DNA is isolated. By careful manipulation, a foreign gene is inserted into the middle of this non-essential segment of DNA.

As the newly-spliced DNA segment is reintroduced to the replicating parent virus, the foreign DNA becomes a permanent part of the parent virus by process of recombination. The resulting progeny virus carrying the foreign gene is selected, purified and amplified.

If the foreign gene was inserted correctly into the recombinant virus, upon immunization it will cause the host to form antibodies against the new disease (foreign antigen) as

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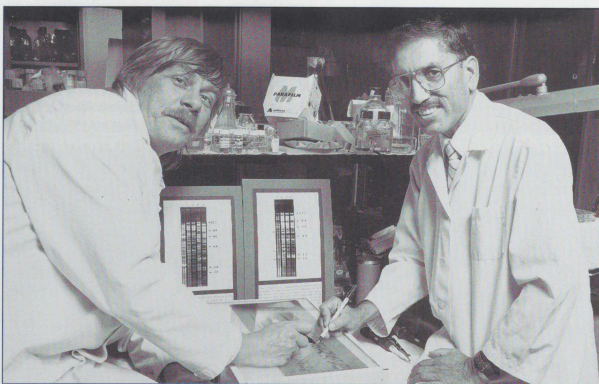
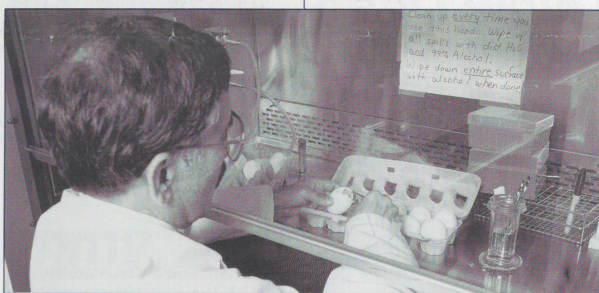
well as the old one. In Dr. Tripathy's research, this was in fact the case.

According to Dr. Tripathy, the poultry industry is well ahead of other meat-producing industries in knowledge of good management and in disease control. Yet despite its progressiveness, the American poultry industry loses \$2 billion

annually to diseases. Less sickness means not only a healthier environment for poultry, but also a more uniform, less expensive product for consumers.

Part of the problem is that it is costly to administer separate vaccines for respiratory, immune system and other types of diseases. Already, the industry has moved from individual administration against some respiratory diseases to mass vaccination via the birds' drinking water or via a spray misted over their cages.

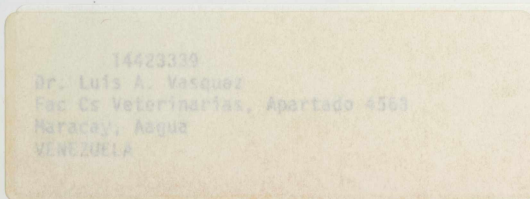
Dr. Tripathy credits the success of his work to cooperation from scientists at the University of Alberta in Canada; the National Institutes of Health, Bethesda, Maryland; the Center for Disease Control, Atlanta, Georgia; his recent sabbatic leave to the Institute of Animal Biology, University of Lausanne, Switzerland; and his associate, Bill Schnitzlein. ■



TOP: Dr. Tripathy inoculates chicken embryos with a pox virus. BOTTOM: Bill Schnitzlein (left) and Dr. Deoki Tripathy (right) read the DNA sequence of a pox virus gene.

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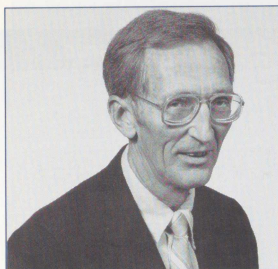
From educational to social, the annual Fall Conference featured something for everyone.

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Dean's Corner

by Dr. Robert A. Twardock



HIGHLIGHTS. What are the highlights of my short stint in the Dean's office? Too many for a short column, but certainly at the top of the list is Dr. Ted Valli's acceptance of our deanship. His excellent background and credentials are described elsewhere in this "Report". He is a warm, friendly, outgoing gentleman. We are anxiously awaiting his arrival in January, and are looking forward to working with him in finding new strengths and directions for our College.

We have not been sitting back waiting for Dean Valli, however. "New Directions" could have been the title of the recent faculty retreat

on alternative methods of teaching and evaluation. About 70 faculty, 13 students, and 9 outside speakers met from Friday noon until 4:00 p.m. Saturday, November 3 and 4, to learn and talk in small groups about how to improve our curriculum and teaching. Our students are the lifeblood of our profession and we must constantly strive to change and adapt to meet their needs for the future.

Other highlights included our most successful Fall Conference and Short Course ever, and the visit of our distinguished alum, Dr. Dick Fink, for "Alumni Comeback Weekend" during Homecoming.

Nearly 300 of you, a record attendance, returned to campus for Fall Conference to hear the outstanding speakers lined up by Dr. LeRoy Biehl and his CEPS staff. Alumni Association Appreciation and Recognition awards were given to several ISVMA executive board members, alumni and friends of our College who have been extremely helpful to our cause recently and throughout the years.

Then during Homecoming weekend, Dr. Fink, immediate past president of the AVMA and a graduate of our first class of 1952, spoke to a

packed classroom of students and faculty about future opportunities in our profession. Dick is the first alum to be invited as a participant in this campuswide student-run Comeback event. His visit culminated with a very special evening in the Ikenberry's home, which Mary and I were also privileged to attend. Dick represented us extremely well in his remarks to the gathering, we were entertained by "The Other Guys" from the University of Illinois Men's Glee Club, and President Ikenberry closed by standing us in an arm-linked circle, swaying to "Hail to the Orange"—a wonderful, warm evening never to be forgotten.

So you can see, this "deaning" business is rewarding in many ways and I'm glad to have had the opportunity and experience. Even in four short months there have been other highlights, too numerous to describe, but the common thread always includes friends who believe strongly in our profession and our College and who want to help. With such support, Dean Valli and our College cannot help but have a bright future. Thank you! ■

Northern Illinois VMA Announces New Award

A GIFT from the Northern Illinois Veterinary Medical Association (NIVMA) has created the NIVMA Graduate Research Award at the University of Illinois College of Veterinary Medicine. NIVMA's membership has voted to provide a \$1,000 research stipend annually on a competitive basis. Those eligible for the award will be in the first or second year of their graduate training and may be from any discipline or department within the college.

The only stipulation that the NIVMA has placed on the award is that the awardee must report on the work at NIVMA's annual continuing education meeting in Rockford.

Dr. Gene Gambrel, Executive Secretary of the NIVMA, presented a check for the first year's award to the college's Dr. Erwin Small during NIVMA's Fall meeting on September 20th. ■

Ted Valli of Canada to Step in as New Dean

IN JANUARY, Dr. Victor E. "Ted" Valli will become the college's new dean, culminating a 13-month international search. Currently a professor of pathology at the Ontario Veterinary College, University of Guelph in Guelph, Ontario, Dr. Valli has also served as chairman of the college's pathology department and as associate dean for research.

Six candidates for the position were brought to campus for intensive interviews with members of the search committee, members of the faculty, and members of the campus administration. The top two candidates were brought back a second time before the campus administration made its final decision.

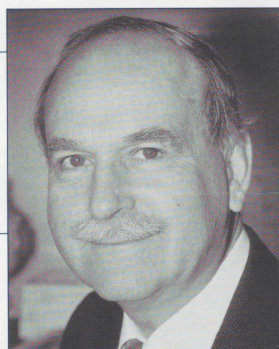
According to the UI's vice chancellor for academic affairs, Robert Berdahl, "Dr. Valli is a very imaginative veterinary educator who will be an effective leader for the College of Veterinary Medicine. He comes with strong recommendations from his position in Canada and with the enthusiasm of the faculty who participated in the search process here. I am very enthusiastic about what he will bring to the college, and I look forward to

working with him."

Dr. Valli succeeds Dr. Robert A. Twardock, who became acting dean after former Dean Richard E. Dierks resigned in August to become dean at the University of Florida.

A native of Brooks, Alberta, and a Canadian citizen, Dr. Valli received his DVM degree in 1962, a graduate degree in clinical pathology in 1967, and a doctorate in pathology in 1969, all from the Ontario Veterinary College. He has published or presented more than 200 professional papers.

"I am excited by the possibilities for interdisciplinary research at the UI," Dr. Valli said. "I believe the College of Veterinary Medicine has excellent physical facilities, which means it has a good faculty and a supportive university. I am looking forward to working with the faculty and the university administration in continuing the progress of the college." ■



Five UI Veterinarians Achieve Board Certification

FIVE VETERINARIANS at the University of Illinois College of Veterinary Medicine at Urbana-Champaign recently passed stringent examinations, making them board certified specialists in their respective fields.

● **Dr. Karen Campbell**, associate professor in veterinary clinical medicine, became board certified in veterinary dermatology;

● **Dr. Ben Johnson**, teaching associate in veterinary clinical medicine, received board certification in veterinary ophthalmology;

● **Dr. Richard Lambert**, visiting research specialist in veterinary biosciences, attained certification in veterinary toxicology;

● **Dr. Deborah O'Keefe**, assistant professor in veterinary clinical medicine, is now a specialist in veterinary oncology; and

● **Dr. Larry Thompson**, research associate in veterinary biosciences, became board certified in veterinary toxicology.

Board certification requirements may vary slightly between specialties, but in general, each candidate must complete approximately five years of additional schooling following receipt of the Doctor of Veterinary Medicine degree and must pass rigorous oral and written examinations.

Board certification enables the veterinarian to practice as a specialist in his/her chosen field. ■

Veterinary REPORT

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Dates to Remember

January 15, 1990

Alumni Reception, Eastern States Veterinary Conference

5:30 p.m.

Chicago Room, Marriott Orlando World Center Hotel, Orlando, Florida.

February 2-4, 1990

Illinois State Veterinary Medical Association Annual Convention, Ramada Renaissance Hotel, Springfield, Ill.

February 19, 1990

Alumni Reception, Western States Veterinary Conference

7 p.m.

Las Vegas Hilton, Las Vegas, Nevada.

April 7, 1990

Veterinary Medicine Open House, 9 a.m. to 4 p.m. at the UI College of Veterinary Medicine in Urbana.

October 11-12, 1990

Annual Fall Conference for Veterinarians, Urbana. Make your motel reservations now!

Dean From Uganda Reflects on Stay at Illinois

IN KEEPING with the purpose of the Fulbright Scholarship program which brought him to the U.S., Dr. Stephen Ssenyonga, dean of the veterinary school at Makerere University in Uganda, has increased the mutual understanding between people in the U.S. and in his homeland.

An outgoing, warm individual, Dr. Ssenyonga regularly circulated among colleagues during his twelve-month tenure at Illinois. He accomplished his goal of finding an improved diagnostic method for anaplas-

He is eager to begin exchange programs between the two colleges...

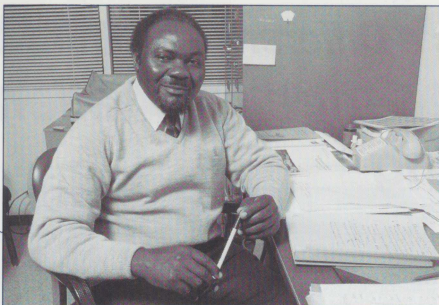
mosis. But he also absorbed information from the people he met and the places he visited.

In contrast to his homeland, where researchers sometimes acquire an elitist attitude, he found that in this country university professors are less territorial about their work. There were few barriers when he had questions, even if the answers required consulting with individuals outside of his specialty area.

"I have valued the amount of human resources available in this country," he said. Problems were easy to tackle when all that was required was picking up the phone and consulting with various researchers. "If a researcher cannot help with a question, he will refer you to someone else," he notes.

The library facilities reinforced the ease of accessing information. "It's very rare to look for a reference and fail to get it," he says.

The dedication of veterinary students at the college



Dr. G. Stephen Ssenyonga, Dean, Makerere University, Uganda

left an impression as well. He is eager to begin exchange programs between the two colleges, which recently signed a Memorandum of Agreement stating their intention to collaborate.

"Rather than telling students at Makerere what I have observed, they need to experience it for themselves, through contact with American peers," he says. He claims that peers are much more convincing teachers.

In Uganda, all veterinarians are employed by the government. Dr. Ssenyonga hopes to change that, so that the government can begin spending its funds on programs rather than salaries.

He is also determined to create a stronger rapport between Makerere University and the common people. He wants to eliminate the strong ivory tower attitude that has prevailed in the past and show the public that the university is a place where you can go to have problems solved.

In some respects, however, universities such as Makerere are ahead of the U.S. Ugandans have had international scope for some time. The U.S. is only beginning to achieve that dimension.

"The notion of America being the whole world is the first thing that will have to change," Dr. Ssenyonga points out. Exchange programs such as the one Dr. Ssenyonga participated in are a positive first step. With the increasing modern emphasis on global thinking, such exchanges are likely to become more common. ■

New Library Service Makes Search for Information Even Easier

FACULTY, graduate students, and DVM students can now find needed information from thousands of the most recent journal articles at the touch of a few buttons.

A new service of the College's library, called "Current Contents on Diskette", was initiated at the end of August. It allows users to call up the content pages of 1200 life science journals and all major agriculture, biology, and environmental science journals on an IBM personal computer located in the library. Articles are indexed by key words in the title and author names, making a search simple and thorough. And the information is updated every week.

Weekly updates make sure the information is "at the cutting edge, the most recent available," says Mitsuko Williams, librarian. Other systems such as MEDLINE (available on compact discs at the library) go through a much more in-depth indexing process to ensure comprehensive and detailed retrieval. This time-consuming process creates a time lag in that "the most current information" is actually 6 months old on the average.

According to Williams, the new program allows users to browse current content pages by journal, by discipline, or by issue. They can also search for article titles and sources by typing in the name of a particular subject, and can then print those references. Or they can download references into a diskette to take back to their office.

Produced by ISI, the Institute for Scientific Information, "Current Contents on Diskette" also allows for easy requests of reprints directly from the authors. The system will automatically print a postcard with a request form for the specific article selected, including a mailing label with the author's address and a peel-off return label with the name and address of the person making the request.

"The library has gotten the printed version of 'Current Contents' for some time," Williams notes. "But one advantage to having the information on diskette is that the scanning is very fast and much more convenient."

"Our next challenge is to have a system here but also make it available in individual offices," she continues. "Before that, though, the price may come down enough that individuals would buy the program on their own."

Currently, the library budget is paying for the annual subscription cost of about \$600 for both the Life Science and the Agriculture, Biology, Environmental Science sections. Donations from alumni and friends to the Veterinary Achievement Fund, the college's annual giving program, made purchase of the hardware possible. ■

Radiologists Peek Inside Egyptian Mummy

CRUMBS of deteriorated wrapping material sifted onto the radiology table as Richard Keen, animal imaging technologist at the college, carefully positioned the x-ray camera above the small, 2000-year-old Egyptian mummy.

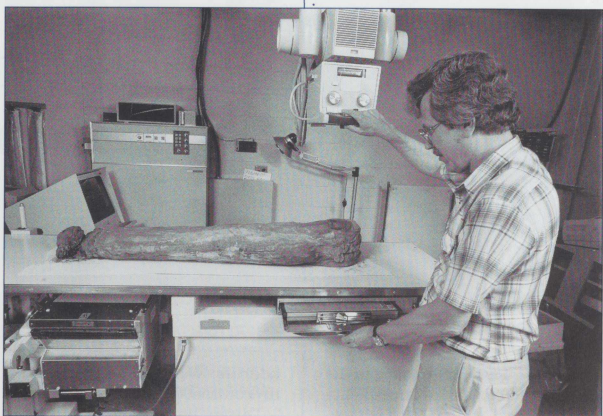
Through a long-standing relationship with Keen, personnel at the UIUC Program on Ancient Technologies and Archaeological Materials (ATAM) chose the UI College of Veterinary Medicine's large animal radiology facility as the first stop in learning more about what was inside the World Heritage Museum's recently-acquired treasure prior to placing it on exhibit.

"I charge them costs, that's all," said Keen. In the past, he has radiographed buckles, statues, and animal mummies for both the World Heritage and Krannert Art Museums. On September 7th, an eager audience was present, hoping to get a glimpse of this unusual "patient" at the college.

Beginning with the skull and moving down the body, radiographs were taken first vertically, then horizontally.

"The epiphyseal joints are wide open!," exclaimed Linda Klepinger, associate professor of physical anthropology at the university.

RIGHT: Radiographs show the mummy's skull. BOTTOM: Rich Keen, radiology technician, positions the mummy for x-rays.



When radiographs revealed some permanent teeth had not yet erupted, Klepinger narrowed the age to 9 years old plus or minus two years. The sex of the pre-pubertal specimen could not be determined. However, Sarah Wiseman, assistant director of the Program on Ancient Technologies,

speculated that it was a male due to the way the mummy was positioned in its wraps, with its hands covering most of its pelvis.

Further testing, including a CAT scan and a Magnetic Resonance Imaging (MRI) exam, was scheduled at Burnham Hospital in Champaign. ■



Illini Grad Makes a Difference in Third World Haitian Experience is Challenging, But Rewarding

by Maureen Birmingham, DVM

Editor's Note: Though the path she has chosen is not traditional, Dr. Maureen Birmingham (IL '83) has found deep satisfaction in assisting underprivileged third world populations develop the skills to improve health care for their livestock. She recently spent 3 1/2 years providing veterinary service and husbandry training in Haiti.

Following a brief break this summer, Dr. Birmingham is currently back doing what she loves most, this time in the Altiplano/Yungas regions near Lake Titicaca, Bolivia. As an ambassador of World Concern/Christian Veterinary Mission, she will cooperate with the National Evangelical Friends Church (INELA) to develop an animal health curriculum for veterinary technicians in the area.

"I WISH YOU and your team had come through here last year," said the man while I was putting all our equipment and medicines back in the truck after a long day of worming, spraying, hoof work and other assorted procedures and treatments. He was thin, wiry and strong but appeared aged beyond his actual years from the hard peasant life.

"Why?" I asked.

"I lost 24 does last year. Every one of my goats died from that big-head sickness. I have no other livestock," he said sadly.

"Do you know what causes the big-head disease?" I asked.

"No, but they die every year from the big-head sickness and diarrhea," he sighed.

Anger and frustration welled up in me. Not directed at him but at the unfair and tragic situation. How can it be that Haiti has been an agrarian society since Christopher Columbus discovered it in 1492 and no one knows that it is simply parasitism that is the leading killer of their livestock and that there is a very simple way to prevent these incredible losses. But then one remembers that since Haiti's independence from France in 1804, this country has had 285 years of instability, corruption and bloody revolution. Consequently, the quality of education, the agriculture, the environment, the economy and any form of infrastructure (particularly in rural areas) has continually declined.

Twenty four goats is a catastrophic loss for one farmer when one considers that each goat sells for approximately \$20 to \$30 and that the average Haitian farmer rarely makes more than \$100 to \$200 per year. In Haiti and many other third world countries, livestock serve as the backbone of the peasant economy. That is, livestock

serve as the bank account and the insurance policy to fall back upon when there are unexpected expenses, emergencies or crop failures. In Haiti, the latter happens often due to the rapid deforestation that has occurred during this century which is resulting in environmental degradation, poor soil fertility and irregular rainfall.

Christian Veterinary Missions (CVM), which is a branch of World Concern, sent me to Haiti in January of 1986 — one month before Jean Claude Duvalier was ousted from power. I witnessed the turbulent aftermath of his removal from power and the continual power struggle that plagues this country up to the present. CVM's purpose is to express God's love in word and deed and to empower the local church to carry out its role in the community, that of ministering to the whole man — physically, socially, intellectually and spiritually. Veterinarians find a warm welcome in many third world countries because of the importance of livestock in the culture and the peasant economy.

As a veterinarian in Haiti, I was involved in the national swine repopulation program which was an aftermath of the swine depopulation due to African Swine Fever which ravaged Haiti and the Dominican Republic from 1979 to 1982. In efforts to control further spread of the disease to North, Central and South America, Haiti and the Dominican Republic were depopulated of their pigs. In Haiti, pigs were the chief means by which to pay for school fees and other unexpected expenses. So the de-

people of varying nationalities and training, I managed two piggeries, and the distribution of piglets to farmers. My work also included much teaching and extension. This necessitated that I live out in rural areas alongside the rural people — an eye-opening experience.

Living and working in Haiti during such times of turbulence, political unrest, tragedy, and high hopes for democracy that came crashing down after an election massacre, caused me to start to understand

The culture, the history and the problems are so complex and so deep. Haiti got under my skin and in my blood. So when my 2-year contract was finished, I found that I couldn't walk away. There are so many needs, some of which a veterinarian can address.

the problems and identify with the Haitian people which included several of my friends and co-workers. The situation is so unjust and desperate: 80% illiteracy, 75% unemployment or underemployment, stagnant economy, declining agricultural production, poor education system, high population pressures, little existing infrastructure and a corrupt government. The culture, the history and the problems are so complex and so deep. Haiti got under my skin and in my blood. So when my 2-year contract was finished, I found that I couldn't walk away. There are so many needs, some of which a veterinarian can

launched a training program to develop veterinary aides — the idea being that these individuals that were trained could then return to their respective villages to share with others what they learned and hopefully apply it as well.

It was a challenge to teach and I think I learned more than those attending the seminars, particularly about techniques of non-formal education as well as the many superstitions, a different cause-and-effect logic and many local remedies. Since illiteracy is about 80% and there is even a lot of pictorial illiteracy, we taught orally and tried to incorporate story telling, skits, demonstrations and "hands on" type teaching. At times we invited the entire community to come for a series of skits, in particular about animal diseases of public health importance. These skits were written by my Haitian co-workers along with participants in the seminars. I think many Haitians are naturals

for drama as they incorporated much comedy as well as local superstitions in the skits. This was a great means of teaching people within their own cultural context.

One of my most satisfying experiences there was working with my Haitian co-workers. They taught me so much about the Haitian culture, values and language. In turn I shared with them my values and taught them about veterinary medicine. We team taught the farmers until my co-workers were comfortable teaching the seminars on their own. This was my goal — to work myself out of a job. World Concern/CVM's purpose is not to create dependency but to build up national leaders (particularly in the local churches) to work in their communities — to be salt and light, to preach the gospel, to bring hope where people are losing hope, to restore dignity and self-worth where there is little, to live the faith in deed as well as word. So we were part of a broader ministry of trying to reach out to the whole man.

Veterinarians have a definite role to fill in the Third World. Livestock will continue to be the mainstay of peasant economies in many countries. There are many international organization, private voluntary organization, government organization and church mission groups that can use the services of the veterinarian. It is important to select carefully.

Foreign service is a most satisfying, challenging and exciting alternative to practice in the U.S. I can guarantee that such an experience will be life-changing. This work causes one to question and readjust one's own priorities and values as well as one's role as a citizen in this world of limited resources. I recommend it to anyone that is open-minded and flexible, likes challenges and can identify with the poor and oppressed — the majority of our world population. ■



Dr. Maureen Birmingham, DVM

population was a major blow to the Haitian people who are already living on the ragged edge of subsistence.

In 1984, repopulation efforts were started in Haiti. The formidable task was given to the Interamerican Institute for Cooperation in Agriculture (IICA), a branch of the Organization of American States (OAS). I had the privilege of collaborating with IICA — an excellent team of

address. World Concern extended my contract for another 1 1/2 years.

During times of national strikes and political unrest when one couldn't leave one's house, I would stay with friends to alleviate the "cabin fever" and we started developing training manuals on livestock husbandry and simple veterinary care. We now have 6 manuals on the different livestock species. It was with these manuals that we

Illinois Veterinary College at Forefront of Clinical Nuclear Medicine

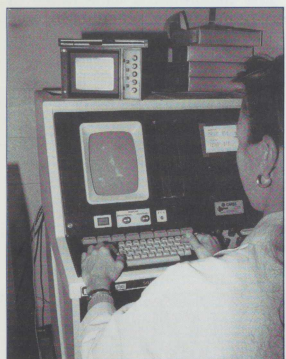
by Tania Banak

It all began in February 1979 with a scan of a colt's lungs. Today, over a decade later, the University of Illinois College of Veterinary Medicine at Urbana is at the forefront of equine nuclear imaging.

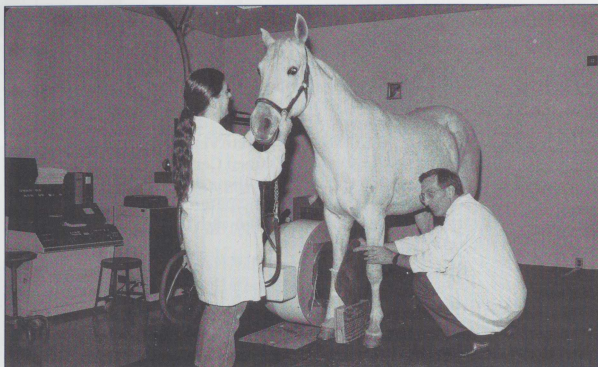
Ten years ago, veterinary nuclear imaging was in its infancy. Before the procedure could be used to diagnose abnormalities, veterinarians had to determine what a normal scan looked like.

At Illinois, case after clinical case has given staff at the college a solid background in the use of nuclear scans for evaluation of equine bone and lung problems. The gamma camera is in use daily on a clinical basis. The 270 cases that are seen each year are clinical totals; research cases are counted separately. Cases are referred not only from Illinois but from the surrounding states of Kentucky, Indiana, Iowa, Wisconsin, Missouri and Michigan. Other veterinary schools nationwide call Illinois when they have questions about clinical nuclear medicine.

According to Dr. Robert Twardock, nuclear medicine section chief at the college, 80 percent of their cases deal with bones; the remaining 20 percent deal with lungs.



Janet Jowers, animal imaging technologist for the nuclear medicine section, enters data on a nuclear imaging case. This one was a leg scan on an older horse which exhibited lameness of an unknown origin.



Dr. Robert A. Twardock (right), positions a horse for a nuclear medicine leg scan as fourth-year veterinary student Connie Brunkow steadies the animal.

"Nuclear medicine scans provide us with an opportunity for earlier diagnosis, especially of early bone injuries," he says. "We can detect disorders before they appear on a radiograph or x-ray, which means the owner or trainer can resolve the problem before the lame horse develops a microchip or fracture which would require a longer layoff."

Nuclear images or "scans" are performed by injecting radioactive material into a patient's bloodstream, leading the animal before the gamma camera, and once the camera is correctly positioned adjacent to the body area of interest, recording the grainy-looking, gamma-ray, dot-pattern image on the computer.

Technetium 99m is the radioisotope used for most nuclear imaging. Because it binds readily to a variety of pharmaceuticals, it can easily be localized via a specific drug to the desired organ or system. It also has a very short half life; within 24 to 36 hours, radiation from a scan dissipates to negligible levels.

Bone lesions are generally associated with increased blood flow to the area so they show up on the screen as hot spots or concentrations of the radioactive material that has been injected into the patient's bloodstream. Fracture nonunions and

lung lesions are opposite; they usually involve an interruption of the blood supply and are therefore seen as a cold spot or absence of radioactivity.

The poorer anatomical detail that results from the dot-like appearance of the scans is not a disadvantage because a scan's purpose is to provide functional rather than structural information.

Scans are generally used in close coordination with radiography. "Most often, scans are requested when a thorough physical examination complete with regional nerve blocks and radiography fails to pinpoint the suspected cause or origin of lameness," notes Dr. Twardock. "In these cases, a scan helps show exactly where radiographic evaluation should be attempted. We also routinely use scans as an evaluative tool to determine how well an injury is healing. It's safe to assume that when a lesion is no longer visible in a scan that the healing process has ceased."

He stresses that nuclear imaging is not a substitute for a thorough lameness evaluation using all the diagnostic modalities at a veterinarian's disposal, however. At Illinois, clinicians find the procedure most useful for early detection of skeletal injury, evaluation of the activity and

significance of chronic lesions, confirmation of questionable radiographic lameness diagnosis, and for monitoring injuries during the healing process.

According to Dr. Gordon Baker, equine section chief at the college, he and his staff have diagnosed numerous cases of bone trauma, stress fractures, and bone diseases such as arthritis and tumors through the use of nuclear imaging. "We've even found that equine carpal joint injuries were mistakenly diagnosed as soft tissue injuries in the past," he points out. "Through imaging, we're now finding that bones are involved."

Ten years ago, veterinary nuclear imaging was in its infancy. Before the procedure could be used to diagnose abnormalities, veterinarians had to determine what a normal scan looked like.

As a result, management and treatment of these injuries have been improved."

The Thoroughbred or Standardbred racehorse that strides onto the specially-built ramp designed to accommodate equine patients to a machine designed for use on humans is blissfully unaware of the high degree of technology in use during its scan. But the animal's owners and trainers appreciate the progress that's been made over the last decade. They're getting more accurate diagnoses of their animal's condition and are able to provide more effective treatment as a result. ■

Research Dogs Continue Service

WHEN ILLINOIS research assistants were offered a chance to visit the dogs that had been part of their hip dysplasia study, they eagerly made the trip to Seeing Eye Inc. in Morristown, New Jersey. Though most of the 37 Labrador retrievers in the project had already been placed in homes, 10 were accepted into the organization's Seeing Eye Dog training program. Dogs accepted into the program were screened for sound temperament and normal hips.

According to Ed Oathout, procurement coordinator for The Seeing Eye, the socialization that these dogs had received during their two years at the University of Illinois made them excellent candidates for

The Seeing Eye program. In fact, all 10 dogs have passed their rigorous training and will soon be placed with their new owners.

"It shows that dogs can be raised in a kennel setting and with proper socialization, adapt to any environment," says Dr. Donna Korvick, a graduate student on the hip dysplasia project. Five veterinary students (Pat King, Jeff Kordell, Kevin Kreier, Amy Morgan, and Kelly Rucker) were chiefly responsible for the dogs' early socialization, daily handling, and outdoor exercise.

"The success in raising well-tempered, well-mannered dogs can be attributed to the efforts of the veterinary students," said Dr. Korvick.

On the streets of Morristown, New Jersey, the research assistants who had worked with the dogs during the hip dysplasia project took turns being led, while blindfolded, by "Dempsey", one of the newly-trained Seeing Eye Dogs. Ed Oathout, Seeing Eye Dog trainer for 25 years, supervised the sessions.

"I was surprised how easy it was to get around, even though I couldn't see," noted Kelly Rucker, third-year veterinary student. "Dempsey led me along crowded downtown sidewalks and across busy city streets. I was totally dependent on her."

The dogs' new blind masters will gain tremendous freedom through use of the guide dogs. Researchers



Kelly Rucker, VM 3, receives guidance from "Dempsey", former research dog turned guide dog, under the supervision of Ed Oathout (left).

on the project are extremely pleased that all of their dogs found excellent homes. They are especially proud that 10 dogs will continue to provide a very special service. ■



Nonacademic Employees Get Awards

THIRTY ONE nonacademic employees were honored during the college's 13th Annual Nonacademic Recognition Program on September 13, 1989.

The featured award each year is the Dr. Robert and Lucy Graham Award, presented to a nonacademic employee at the college who has made outstanding contributions to the college. This year's recipient was Dee Bergman, staff secretary in administration. She was presented with a plaque and a \$200 check by Dr. Ken Holmes, chairman of the college's Awards and Scholarships Committee.



Dee Bergman (right) accepts the Robert and Lucy Graham Award from Dr. Ken Holmes.

Also honored were 30 employees who had served the university between 5 and 25 years. Completing 25 years of service were Everett Block, veterinary clinical medicine (VCM), currently on disability leave, and Roger L. Hieser, Sr., veterinary pathobiology (VP).

A pin and framed certificate for completing 20 years of service went to Joyce Amacher, administration; Russell Hockersmith, lab. an. care; and Joan Quinn, administration.

Honored for 15 years of service were Theodore Diem, Dixon Springs Agric. Center; Mary Hayn, VCM; and Frank Phares, VCM.

Completing 10 years of service were Timothy Chilton, lab. an. care; Kevin Fink, lab. an. care; Terry Hite, lab. an. care; Shirley Pelmore, administration; Ronny Reed, Dixon Springs Agric. Center; James Stockdale, Dixon Springs Agric. Center; Kathy Ellis, veterinary biosciences (VB); Sharol Hanson, VB; and Kevin Grice, VCM.

Five years of service were completed by Carol Lynn Hassan, administration; Gary Sergent, lab. an. care; Carol Olson, VB; Robert Pausch, VB; Connie Arnold, VCM; Sharon Grove, VCM; Susan Hewitt, VCM; Jackie Long, VCM; Lucy Remillard, VCM; Kristie Stasi, VCM; Richard Hansen, VP; Joy Kristunas, VP; and Minnie McNary, VP.

Acting Dean Dr. Robert Twardock addressed the group, praising them for their supportive role in the workings of the college. Guest speaker May Berenbaum, entomology professor on campus, likened the habits of veterinary-related parasites to the working habits of humans, eliciting hearty chuckles when the descriptions seemed to match certain personalities. ■

Eight Honored During Veterinary Alumni Annual Meeting

EIGHT INDIVIDUALS were honored during the Illinois College of Veterinary Medicine Alumni Association's annual meeting on October 6, 1989.

Dr. Warren N. Anderson, Naperville, Ill.; Dr. Wayne W. Brown, Paw Paw, Ill.; Eve C. Larocca, Batavia, Ill.; Dr. Robert E. McKinney, Jacksonville, Ill.; and Dr. John Wayne Rehn, Alpha, Ill.; all with the Illinois State Veterinary Medical Association, were awarded framed Certificates of Appreciation to recognize their devotion to the veterinary college and for their unselfish participation in numerous visits to the college in order to assist with the selection of a new dean.

Dr. John D. Clayton, Polo, Ill., received the association's Merit Award for extraordinary interest and loyalty to the college and for having attained outstanding success and distinction in the profession of veterinary medicine. The award recipient must be a graduate of the UI College of Veterinary Medicine. Dr. Clayton received his DVM degree from the UI in 1955 and has practiced in a partnership with Dr. J.T. O'Conner at the Polo Animal Hospital since 1957. He has been active in organized veterinary medicine, including a stint as president of the Northern Illinois Veterinary Medical Association. He has also been active in civic affairs, having served as president of Polo's Lions Club, School Board, and Park Board. He is still an alderman on the Polo City Council, a member of the Chamber of Commerce, and a council member of St. Mark's Lutheran Church in Polo.

Dr. Bill Barnes, Chicago, was given the Service Award, presented to a non-alumnus of the College of Veterinary Medicine who has demonstrated by his or her actions devotion to the veterinary medical profession and has contributed significantly to the development of the College of Veterinary Medicine at Urbana-Champaign. He is a long-time active member of the ISVMA and Chicago Veterinary Medical Association (CVMA), having served in numerous elected positions including ISVMA president in 1987 and CVMA president in 1972. In addition, Dr. Barnes represents non-UI-graduate veterinarians for the UI Foundation. In 1989, he received the ISVMA Presidents Award. He has also received several plaques



Dr. Jon Quinton (left), president of the University of Illinois Veterinary Medicine Alumni Association, presents (from left to right) a Special Service Award to Dr. Jack Manning, Champaign, Ill.; a Merit Award to Dr. John Clayton, Polo, Ill.; and a Service Award to Dr. Bill Barnes, Chicago.



Pat Hayes (left), Director of Programs and Services at the University of Illinois Alumni Association, presents Certificates of Appreciation to ISVMA members (from left to right) Dr. Warren Anderson, Naperville, Ill.; Dr. John Wayne Rehn, Alpha, Ill.; Eve Larocca, Batavia, Ill.; Dr. Robert McKinney, Jacksonville, Ill.; and Dr. Wayne Brown, Paw Paw, Ill.

from the AVMA for work done on their behalf.

Dr. Jack P. Manning, Champaign, Ill., professor emeritus at the UI College of Veterinary Medicine, received the Special Service Award, given on an intermittent basis to a recipient deserving of special recognition for service to the college and to the veterinary profession. Having received his DVM from Kansas State University in 1951, Dr. Manning has been employed at the UI since 1954. During that time he taught a wide range of courses and was instrumental, along with Dr. Harry Hardenbrook, in getting the 1975 Illinois Racing Act passed. The Act provided as much as \$140,000 per year to the college for equine research. He has also been active in both local and national veterinary organizations. He retired in 1985. ■

Six Classes Hold Reunions during Annual Fall Conference on October 5-6th



Class of 1959, Jumer's



Class of 1969, Jumer's



Class of 1979, the Lipton Residence



Class of 1964, Sea Merchant Restaurant

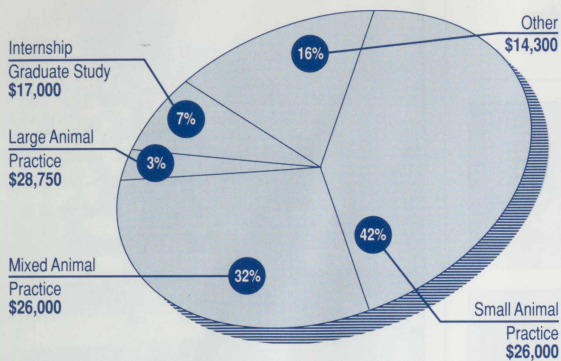


Class of 1974, Sea Merchant Restaurant



Class of 1984, VMBBS

1989 Graduating Class: Where are they now?



■ **Dr. Richard B. Fink**, 1952, senior associate of a six-man small animal practice in Whittier, California, returned to campus as an Illini Homecoming Comeback Guest on Oct. 27-28th. He was one of six individuals honored by the campus. Dr. Fink mingled with alumni, faculty, and students at a college reception after discussing "Career Opportunities in Veterinary Medicine" with an attentive crowd of veterinary students. He is our first graduate to be involved in the UI student alumni association's Illini Comeback program.

■ **Dr. Peter H. Smith**, 1957, of Bloomington, Ill., recently retired after 30 years of service to the community. Dr. Greg Ekdale (ISU '76) purchased his practice.

■ The former **Dr. Donald L. Houston**, 1959, was memorialized recently at Texas A&M with the dedication of the Donald L. Houston Meat and Poultry Inspection Sciences Building. Dr. Houston, an official with the U.S. Department of Agriculture, was a leader in the modernization of the meat and poultry inspection service.

■ **Dr. Robert Pensinger**, 1960, Santa Cruz, California, is founder and director of The Veterinary Post-Graduate Institute, which offers 12 comprehensive three-day continuing education courses a year.

■ **Dr. Charles Starling**, 1960, Springfield, Illinois, retired from Capitol Illini Veterinary Services in 1989 to pursue a new calling as the stern 1830's schoolmaster at New Salem State Park. He is augmenting his role as interpreter and volunteer trainer at New Salem by pursuing a master's degree in history at Sangamon State University.

■ According to the St. Louis Post-Dispatch, **Dr. Larry Millis**, 1965, a veterinarian at Millis Animal Hospital in Richmond Heights, Missouri, served as a contest judge for the newspaper's Favorite Pet Stories Contest in August. Readers submitted stories which six judges evaluated to find a grand-prize pet-tale teller.

■ **Dr. Jayne (Hooks) Jensen**, 1970, recently opened her own veterinary practice in her home in Issaquah, Washington, near Seattle. That's in addition to her appearances on radio and TV as

co-host of "ask your veterinarian" programming and as a volunteer for Morris Animal Foundation. She and her husband, Douglas, have three children, five horses, three dogs, two cats, three birds, and a rat.

■ **Dr. Tom Champley**, 1971, of Oregon, Ill., was elected president of the Northern Illinois Veterinary Medical Association during their 69th Annual Fall Meeting in Rockford, Ill. on Sept. 20, 1989. He replaces Dr. Craig Stevenson, 1974, of Sandwich, Ill.

■ **Dr. Michael Pavletic**, 1974, was chosen by fourth-year veterinary students at Tufts University School of Veterinary Medicine to receive the Small Animal Clinician Award. He is an associate professor of surgery at the school.

■ **Dr. Linda A. Ross**, 1974, of Newton Lower Falls, Massachusetts, has been appointed chief-of-staff of Tufts University School of Veterinary Medicine's Foster Hospital for Small Animals. She has been an assistant professor of medicine at Tufts since 1981 and has served as director of continuing education for the past two years.

■ **Dr. Michael P. Thomas**, 1974, recently purchased Teegarden Veterinary Clinic in Washington, Ill. along with Dr. D. P. Lott. Drs. Thomas and Lott also own the Tremont Veterinary Clinic in Tremont, Ill.

■ **Dr. John Herrmann**, 1978, of Freeport, Ill., recently attained board certification in the American College of Theriogenology.

■ **Drs. David Kruger and Ronald Nord**, 1978 and 1971, paid \$450 for the 12-pound Grand Champion Aged Cheddar Cheese at the Illinois State Fair, exhibited by the Arthur Cheese Company, of Arthur, Ill. They also served as Illinois State Fair veterinarians.

■ **Dr. Jerome Geiger**, 1980, of Veedersburg, Ind., was elected president of the College of Veterinary Medicine Alumni Association during the alumni board meeting on September 23, 1989. **Dr. Gary Brummet**, 1981, of Urbana, is president-elect.

■ **Dr. John Waddell**, 1981, is co-owner of Sutton Veterinary Clinic P.C., a large animal practice with two satellite clinics. He also operates a farrow-to-finish

Alumni Notes

swine operation and a 2,000-head cattle backgrounding feedlot in Sutton, Nebraska.

■ **Dr. Roy Johnson**, 1982, and his associate Dr. David Helper, 1983, were featured in the Albuquerque Journal recently. Dr. Johnson was recognized for his work in establishing a program to provide veterinary care for the pets of senior citizens who can't afford treatment on their own. As chairman of the Animal Welfare Committee of the New Mexico Veterinary Medical Association, Dr. Johnson says 35 veterinarians in the Albuquerque area have already agreed to participate.

■ **Dr. Jim Floyd**, MS 1988, now on the faculty at Auburn University, Alabama, recently became board certified in the American College of Theriogenology.

■ A check for \$4,500 from the "Illini Benefit Hunter Horse Show" held in June at Dr. Bill and Nancy Wright's Willow Creek Farm in Rochester, Ill. was presented to the college during the annual Fall Conference for Veterinarians, October 5th. The funds will benefit the Maria Caleel Fund for Equine Sports Medicine Research in the college's veterinary clinical medicine department. **Maria Caleel**, 1991, was a first year veterinary student when she died tragically in March of 1988. Show organizers Nancy Wright (left) and Terri Foreman (center) presented the show's proceeds to Dean Bob Twardock.

Maria's classmates sponsored several classes and provided volunteer labor for the show. They had previously donated a palm tree in her memory (which was placed in the college's Atrium), and an equine intensive care equipment cart. Maria had planned a career in equine surgery after graduation.



In Memoriam

■ **Dr. W. Duane Dean**, 1966, of Barry, Ill., died October 18, 1989. He had practiced in western Illinois since graduation. Memorials may be made to the Barry United Methodist Church Memorial Fund.

■ **Robert Pausch**, a research technologist II at the UI College of Veterinary Medicine's Diagnostic Laboratory, passed away on October 21, 1989. Memorials may be made to the Champaign County Humane Society or the National Wildflower Research Center, Austin, Texas.

Simon Retires After 29 Years of Service



DR. JOE SIMON, professor of veterinary pathobiology, retired on August 31, 1989 after 29 years of service. The plucky professor had been a member of the University of Illinois College of Veterinary Medicine faculty since 1960.

Up to the end, Dr. Simon taught a variety of pathology courses to veterinary students at the college, ranging from macroscopic pathology to the pathology of infectious diseases and comparative oncology. In 1984, the fourth-year veterinary students selected him as recipient of the Norden Distinguished Teacher Award on the basis of his outstanding teaching ability, character, and leadership qualities.

In 1984, the fourth-year veterinary students selected him as recipient of the Norden Distinguished Teacher Award on the basis of his outstanding teaching ability, character, and leadership qualities.

Dr. Simon earned his DVM degree from Kansas State University in 1946. After practicing for several years, he returned to school at the University of Wisconsin and completed a PhD degree in 1951. He remained at Wisconsin until 1958 in a teaching and research position. His next position was at the University of Florida Cancer Research Laboratory, where he stayed until 1960, when he accepted a position at the University of Illinois.

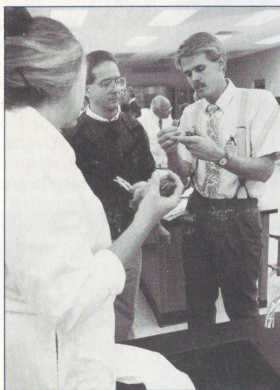
Throughout his veterinary career, Dr. Simon has published approximately 130 scientific papers. He is also a member of a variety of veterinary professional and honor societies, including the American Veterinary Medical Association, the American College of Veterinary Pathologists, the American Society of Experimental Pathology, and the International Academy of Pathology. He has served as major professor for a number of PhD and MS candidates and on many other thesis committees in both the UI veterinary and agriculture colleges.

In 1973, Dr. Simon took sabbatical leave to study exotic diseases, livestock production and diagnostic veterinary service in Israel. In 1980, he again took leave, this time in Malaysia.

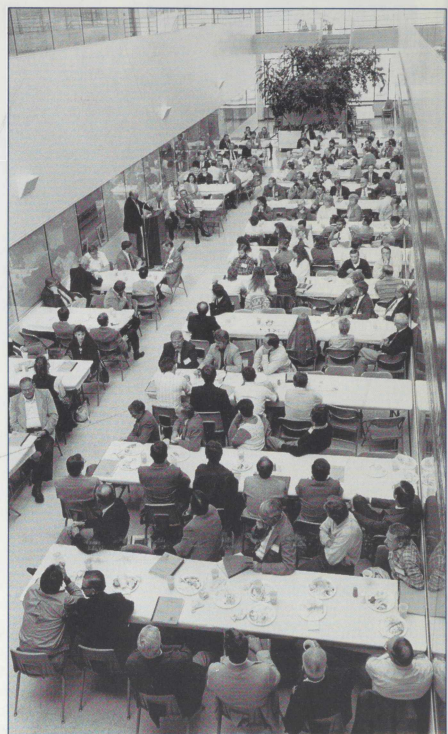
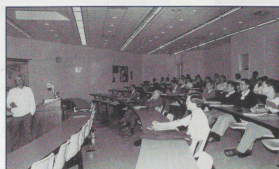
He and his wife, Ellen, plan to stay in Urbana, at least for a while. Ellen is still working as a research scientist in the Department of Ecology, Ethology and Evolution. ■



70th Annual Fall Conference Boasts Largest Attendance to Date



Educational lectures as well as wet lab sessions, balanced by time for social gathering, earmarked the 70th annual Fall Conference and Short Course for Veterinarians on October 5-6, 1989. With nearly 300 in attendance, this was the largest Fall Conference to date.



PHOTOS BY TAMIA BAKAK

College Briefs

● After a lull of several years, **Pandora** (the college's student yearbook) is being revived. The Class of 1991 is busy raising funds to carry this project off. They extend thanks those faculty and staff that already have helped underwrite the yearbook financially. Alumni or other friends who would like to help can donate \$20 in exchange for having their name listed in the yearbook. The 1991 yearbook itself can be advance ordered for \$25. Make checks payable to "Class of '91 Yearbook" and send them to Darrell Greathouse, VM 3, at the Veterinary Report address.

● This fall, 83 students were admitted to the veterinary Class of 1993; 55 of those were female, 28 were male.

● Clients that want to wait while their pet has surgery, need time to adjust to the idea of euthanasia, or want to visit a convalescent pet at the hospital can now be accommodated in the college's newly established **Grief Management Room**. Formerly a storeroom, the facility provides options that were difficult or impossible before.

● The college's **DVM/Law degree program** has been approved at the campus level, making it an official option for interested veterinary students.

● **Dr. Gordon Baker**, professor and chief of the equine section, spent part of a 6-month sabbatical leave working with veterinarians in California to gain insight into what can be done in the "real" world when the bottom line is economics. He observed private equine consulting surgeons plus worked with track veterinarians at California's Santa Anita and Hollywood Park Racetracks. Treatment of immuno-competent foals, management of bleeders, and respiratory noise in exercising racehorses are some of the areas he looked at.

In addition, Dr. Baker spent time at the Royal Veterinary College in London. He visited Dr. Lawrence Geering, head of the equine research group there, and observed their work

as well as made presentations about Illinois research.

● **Dr. Erwin Small** showed 19 staff persons from the American Veterinary Medical Association around the veterinary college on Saturday, August 19th. With the assistance of veterinary students Alicia Ragni, VM 4; Paul Osadjan, VM 4; and Eric Grebe, VM 4; he provided many in the group with their first look at veterinary college facilities.

● **Dr. David Stahl**, assistant professor of veterinary pathobiology, was invited to talk at the Fifth International Symposium on Microbial Ecology, held in Kyoto, Japan from August 27th through September 1st. He presented a paper entitled



"Identification of Microorganisms at the Molecular Level". Approximately 1,100 scientists from across the world attended the symposium.

● **Dr. Deoki Tripathy**, professor of veterinary pathobiology, was interviewed by Doug Weikle of Washington D.C.'s "Voice of America" radio program on September 6th. The topic was "Genetically Engineered Poultry Vaccines".

● **Dr. Deoki Tripathy**, professor of veterinary pathobiology, was invited to speak at the 40th North Central Avian Disease Conference and Poultry Respiratory Disease Symposium, held in St. Paul, Minnesota on September 18-20.

He chaired one of the general sessions at the conference and also spoke on "Pox viruses" during the symposium.

● **Dr. Gary Koritz**, professor of veterinary biosciences, was invited to co-chair the opening session of the International Seminar on the Pharmacokinetics of Veterinary Drugs in Fougères, France, between October 11-12th. The purpose of the meeting was to bring together approximately 250 scientists from academia, the

pharmaceutical industry, and governmental drug-regulatory agencies from across Europe and the U.S. to address the role of pharmacokinetics in the approval and regulation of veterinary drugs within the European Common Market.

Dr. Koritz presented a paper on the "Influence of Peak and Trough Antimicrobial Drug Concentrations on Dosage Determination". He was subsequently assigned to a European committee to develop guidelines for the use of pharmacokinetics in the drug approval and regulatory process.

● **Dr. Val Beasley**, associate professor of veterinary biosciences, spoke at the 1989 Scientific Meeting of the American Association of Comparative Toxicologists (AACT) in Atlanta, Georgia from October 12-15. The focus was on comparative toxicology.

● **Dr. Gerald McLaughlin**, assistant professor of veterinary pathobiology,



was in The Gambia, West Africa between October 25 and November 14. Together with scientists from Geneva, he participated in a World Health Organization-sponsored field test of a nonisotopic DNA probe for *P. falciparum* malaria. The group visited Brian Greenwood's Medical Research Center in Fajara, near Banjul. Both an *in situ* and a dot-blot protocol were evaluated with human blood samples near the peak of the malaria season.

● **Karen Bockelmann**, VM 2, has been selected as the University of Illinois Ballard Student. She will serve as the campus Morris Animal Foundation representative for the next two years.

● **Dr. Erwin Small**, associate dean of alumni and public affairs, joined the Society for International Veterinary Symposia in Christchurch, New Zealand on October 28th to meet with New Zealand veterinarians from the area.

On October 30th, he was invited to address symposia participants as well as Australian veterinary college faculty and students in Melbourne, Australia on "New Information on Lyme Disease". The next day, he discussed "Clinical Diagnostics" at the University of Sydney, in Sydney, Australia.

● **Dr. Karen Harlin**, analytical chemist, received an award from the



Association of Official Analytical Chemists during the annual meeting of the American Association of Veterinary Laboratory Diagnosticians held in Las Vegas on October

31st. The award recognized her outstanding contributions in methods validation in veterinary analytical toxicology.

● **Dr. Gavin Meerdink**, clinical professor of toxicology, was elected president of the American Association of Veterinary Laboratory Diagnosticians during their annual meeting in Las Vegas on October 31st.

● A faculty retreat dealing with **Alternative Teaching and Evaluation Methods** was held at the University Inn on November 3-4, 1989. Nearly 100 of the college's faculty attended. Some of the sessions provided hands-on experience to familiarize faculty with new methods.

● **Dr. H. Fred Troutt**, professor and head of veterinary clinical medicine, visited Egerton University, Njoro, Kenya between November 4-16, 1989. As a member of the College of Agriculture's International Development for Agricultural Training (IDAT) team, he facilitated the development of mutually beneficial dairy production and health programs between Egerton and the University of Illinois.